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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/336,207	06/18/1999	ROBERT G. MCCrackEN	8594560/9702	7367

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SUITE 2500
DES MOINES, IA 50309-3993

EXAMINER

HORTON, YVONNE MICHELE

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/336,207

Applicant(s)
Robert G. McCracken

Examiner
YVONNE M. HORTON

Art Unit
3635



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 17, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

Art Unit: 3635

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 11/17/03 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/336,207 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 details that the end plate provides for a “full moment connection”; however, this recitation is vague in that it is not exactly clear what is inferred by a “full moment connection”.

As best understood, the mere attachment of the end plate to the beam subjects the end plate along with the remainder of the beam to a “moment” when a force is applied thereto. Without further clarification it is not clear whether there is a full moment connection.

Art Unit: 3635

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1,4-5 and 8-10 are rejected and claim 12 is rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI.

CH 000414118 discloses a beam (B) including a pair of longitudinally extending and opposing “C-shaped” flanges (2) each having a central web section (W), a pair of inwardly extending leg sections (L) and an inturned portion (IT) (See the marked-up attachment from the previous Official Action dated 02/05/01); and a convoluted web member (1) having alternating protrusions (4) adjacent to leg sections (L), (See the marked-up attachment from the previous Official Action dated 02/05/01). The web member (1) is secured to the central web section (W) of the flanges (2), and the protrusions (4) are secured to the leg sections (L) by securing means (3) and the in-turned portions (IT) are also indirectly secured by means (3) also. CH 000414118 discloses the basic claimed beam except for the use of end plates. The use of brackets and end plates to provide for the capability of interconnecting beam members is old and very well known in the art. BERNARDI teaches that it is known in the art to provide a beam structure (10) with end plates (36). It would have been obvious to one having ordinary skill in the art to provide the beam member of CH 000414118 with the end plates of BERNARDI in order to enable adjacent beam structures to be secured together and to provide the beam structure with added stiffness adjacent the ends thereof. Without end plates, a beam is weaker at the ends and are more likely

Art Unit: 3635

to give under force applied at the ends. The functional recitation that the end plate provides for a “full moment” connection has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a “means” for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant presence of the functional language.

In reference to claims 4 and 5 the web member (W) and the flanges (2) of CH 000414118 are coextensive in length and are made from sheet metal, (obtained from a brief translation).

In regards to claims 8 and 9, the web member (W) is secured to the central web section (20) of the flanges (2) by welds (3), and the protrusions (4) are also secured to the leg sections (L) and in-turned portions (IT) by welds (3).

Regarding claim 10, the flanges are formed from sheet material, a material that inherently enables the flange members to be penetrated if desired or needed.

In regards to claims 12, CH 000414118 discloses the use beam (B); however, it does not disclose the use of a pair of beams. Although CH 000414118 does not disclose the use of a pair of beams, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the beam (B) CH 000414118 with an additional beam (B); wherein the beams (B) would be connected in abutting engagement at their end plate, since the mere duplication of essential working parts of an invention involves only routine skill in the art. Adding an additional beam is quite conventional in the art especially when used in extended

Art Unit: 3635

length environments such as bridges. Of course, attaching the members at the ends provides added strength.

Claims 2,3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI as applied to claim 1 above, and further in view of U.S. Patent #6,253,529 to De BOER. As discussed in paragraph 2 above, CH 000414118, as modified by BERNARDI, discloses the basic claimed beam member except for the inwardly extending sections of the opposing flanges being recessed. Although it is old and very well known in the art to form a recess in a member to flushly accommodate and tightly position a second member adjacent thereto, De BOER teaches that it is known in the art to form recesses (19,34,35) in the inwardly extending legs (14,15) of member (12). Hence, it would have been obvious to one having ordinary skill in the art to provide the inwardly extending legs of the opposing flanges of CH 000414118, as modified by BERNARDI, with the recesses of De BOER in order to ensure a proper, flush and secure fit between the end plate and the adjacent and/or interfitting members.

In further reference to claim 3, the size of the recess with respect to the end plate would have been an obvious matter of design choice depending upon how securely the end plate is needed to be positioned against the opposing flanges. If not play is desired, the size of the recess is considerably close to the thickness of the end plate.

In further regards to claim 11, the flanges (2) are C-shaped and leg sections (2) include in-turned portions (IT), (See also the marked-up attachment from the previous Official Action dated 02/05/01).

Art Unit: 3635

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI, as applied to claim 1 above, and further in view of U.S. Patent #5,956,919 to McCracken. CH 000414118, as modified by BERNARDI discloses the basic claimed beam except for the specifics of the material characteristics. McCracken, in column 3, lines 25-29, teaches that the metal forming the web and the metal forming the flanges have "distinct" characteristics and thicknesses - the web being 0.0598 inches and 16 gauge and the flanges being 0.0747 inches and 14 gauge. Hence, it would have been obvious to one having ordinary skill in the art to form the web and flanges out of a metal having "distinct" characteristics and thicknesses in order to be used as a replacement for lumber beams which are conventional in the art for door and window framing members, but are extremely susceptible to warping when encountered by moisture; or for use in forming supports for concrete structures. The applicant is further reminded that material selection and the thickness thereof is an obvious matter of design choice that depends on the desired performance characteristics of the resulting beam member.

Response to Arguments

6. Applicant's arguments filed 11/17/03 have been fully considered but they are not persuasive.

In regards to the applicant's argument that BERNARDI does not teach the use of an end plate having a full moment connection, as stated above, the mere attachment of the end plate to the beam subjects the end plate along with the remainder of the beam to a "moment" when a force is

Art Unit: 3635

applied thereto. In fact, as the members are connected end-to-end the entire member would also endure a connection moment when a force is subjected thereto. Further, the prior art Figure as shown in '256 has nothing to do with the merits of '256 alone.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909.

Yvonne M. Horton
Primary Examiner
Art Unit 3635
December 15, 2003

A handwritten signature in black ink, appearing to read 'YMH', is written over the printed name 'Yvonne M. Horton'.